

And these molecules, in entering into the molecular compounds which are colloids, manifest properties which are exactly analogous to the atomic affinities, and valencies, and which can only be called 'molecular affinities' and 'valencies'. Further : 'Such molecular affinity and valency do not belong to any particular atom or group of atoms in the molecule, but are a property of the molecule as a whole. Molecular affinity is a specific property, just as is atomic affinity.'

Moore asserts that something similar is true also of crystalloids, as when a crystal of sodium iodide is found to have exactly two molecules of water to each molecule of the iodide ; and true chemical union is also demonstrated by the large amount of heat set free when the molecular union between the salts and water takes place '.

These chemical reactions between the large molecules which are combined to form colloids are characterized by their slow or gradual progress. In many cases such a colloidal chemical change is never complete, and in others slight changes in the system may continue for days, the system slowly pulsating up and down about an equilibrium point'. Then Moore goes on to point out that the colloids within living cells possess both fat and carbohydrate molecules united to the protein molecules, ⁴ forming a mobile colloidal whole, in which oscillations are ever occurring and new products being elaborated'.

Nor does the complexity of chemical cohesion stop here. Crystalloids may combine with colloids, 'Such crystallo-

colloids play a most important part in the life-work of the living cells.' Thus the colloidal aggregate of the cells contains inorganic salts which ' are indispensable in all living cells and exist in union with the proteins forming crystallo-colloids '.